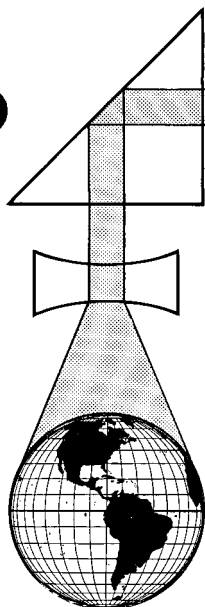


~~SECRET~~

Declass Review by NGA.

R & D NEWS NOTES

Published by TECHNICAL SERVICES and SUPPORT GROUP

Vol. 1, No. 4

May, 1968

The following items have been taken from R&D progress reports of the Technical Services and Support Group and are being distributed because of their general interest. We would like to know what questions or problems you have concerning the items reported in this edition. Your comments concerning related R&D topics will also be appreciated. A form is attached that will make it more convenient for you to submit your comments. An effort will be made to answer them either personally or in future R&D News Notes.

What is "EXRAND"?

Perhaps you have heard the name "EXRAND" in connection with R&D and wondered what it is and how it functions. EXRAND is the Exploitation Research and Development Subcommittee of COMIREX. Chaired by [redacted] of TSSG, it is made up of members from CIA, NPIC, Army, Navy, Air Force, NSA, DIA [redacted]. The Subcommittee meets monthly at NPIC and has as its basic missions: Remain aware of the characteristics of future collection systems to define long-term exploitation R&D objectives; provide a focal point for the exchange of technical information between elements of the intelligence community involved in R&D; and develop a framework to review national imagery exploitation R&D programs to meet national exploitation objectives. In addition, the Subcommittee will identify projects which will benefit by standardization and price reduction if purchased jointly by more than one Government agency.

By accomplishing these objectives, EXRAND seeks to assure that the government obtains the most benefit from the R&D dollars it spends and that the P.I. is provided with appropriate equipment and techniques to carry out his job. Subcommittee contact is through the Executive Secretary, [redacted] or [redacted] through individual EXRAND members. [redacted]

WARNING
THIS DOCUMENT IS FOR USE BY U. S.
GOVERNMENT PERSONNEL ONLY. COM-
MERCIAL INTERESTS CANNOT REVIEW OR
OBTAIN COPIES OF THIS PUBLICATION

1

GROUP 1
EXCLUDED FROM AUTOMATIC
DOWNGRADING AND DECLASSIFICATION

~~SECRET~~

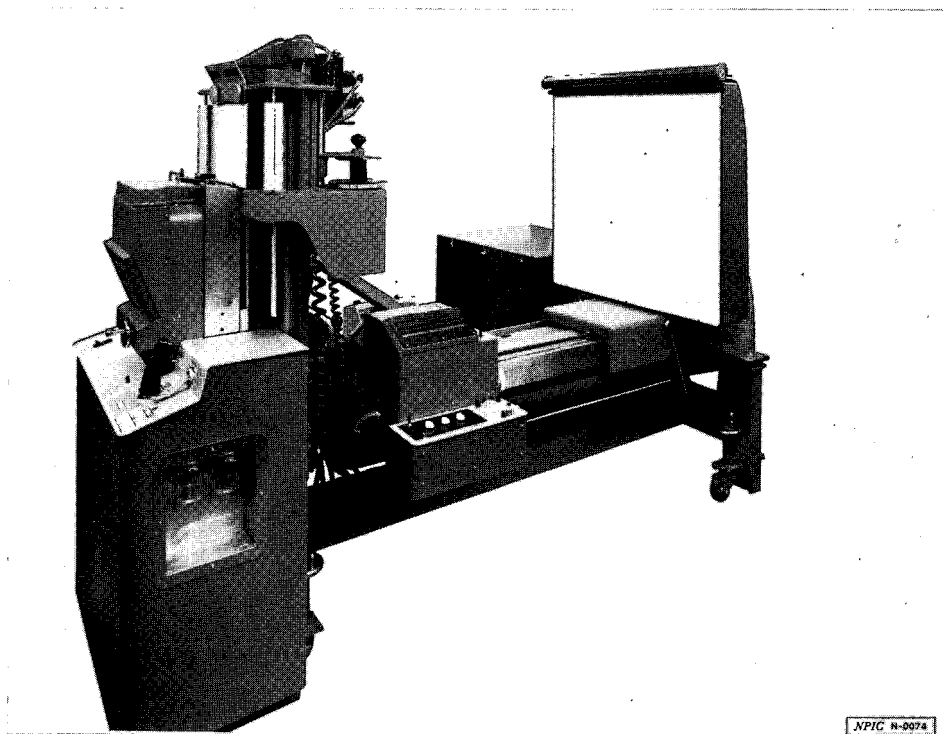
~~SECRET~~

BPE--Another NPIC Success

It now seems safe to label the [] Precision Enlarger (BPE) as another successful NPIC R&D effort. A total of 11 BPE's have now been ordered by members of the intelligence community. The first of the series, developed by TSSG under a contract with [] has been receiving considerable use at NPIC for a year now. It is capable of producing enlargements up to 40 by 40 inches with magnifications continuously variable from 3 to 153X. It can provide up to 550 lines per millimeter resolution at 60X magnification. A fluid surrounds the film at the gate, in order to remove dust, insure flatness, and to fill in and mask scratches on the film surface. Roll film sizes from 70 mm to

25X

25X



9.5 inches wide can be accommodated. The BPE is a generation advanced from [] 10-20-40 enlarger, which produced an 8x10 enlargement at only three set magnifications. To our knowledge, these as well as other characteristics make the [] Print Enlarger the most advanced enlarger in the world. NPIC will receive its second BPE in about one year. The maximum benefits are realized from expended R&D funds when many government agencies share in the results of developments such as the BPE. [] Room 5S 453) is the Project Officer.

X1

X1

X1

X1

~~SECRET~~

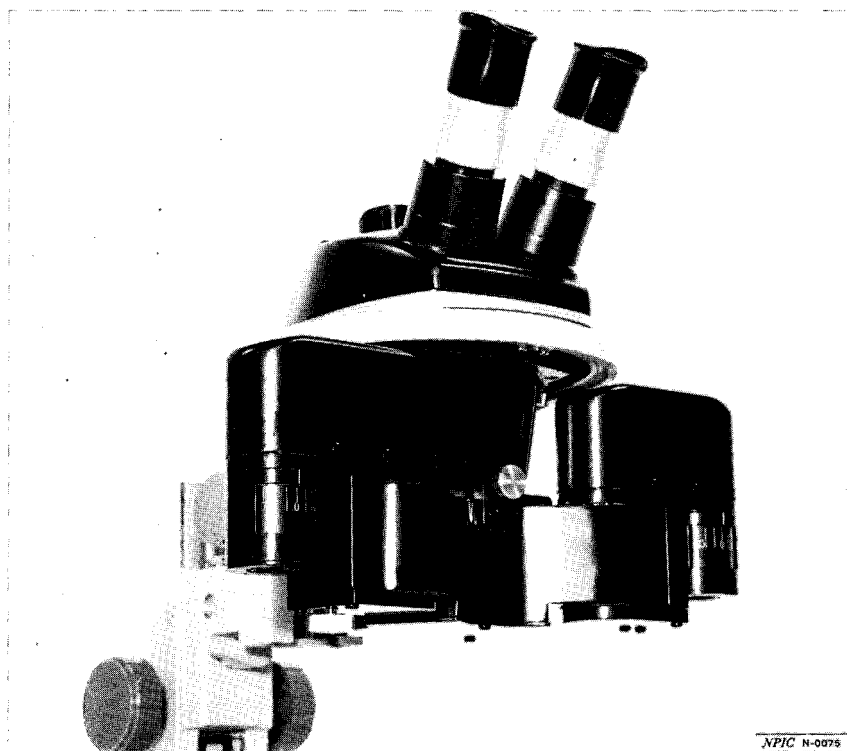
~~SECRET~~Popular Zoom 70 Attachment

X1
X1
NPIC will soon have more than 200 of the newly developed Rhomboids for the [] Zoom 70. The Rhomboid links stereo images up to $9\frac{1}{2}$ inches apart and allows complete independent optical rotation of either image. It fits any [] Zoom 70 microstereoscope that has been modified with a "dovetail attachment" which connects to the bottom of the Zoom 70. Some PI's have experienced difficulty in keeping this rhomboid in focus. A new focus screw has been produced that is inserted in the bottom of the rhomboid and should reduce this problem. This attachment will be installed on all new rhomboids and can be added to those already in use. The Zoom 70 equipped with this accessory can still resolve in excess of 300 lines/mm using its 10X eyepieces. []

X1
X1
X1
[] Room 5S 453J) is the Project Officer on this development.

[] through a subcontract with [] is preparing an unclassified programmed instruction course (self-instruction) on how to use the [] Zoom 70 with the Rhomboid attachment. It should be available in about two months and will be distributed to those offices using the subject equipment. []

X1
X1
[] Room 5S 453B) is the Project Officer concerned with this program. []

~~SECRET~~

~~SECRET~~Better Rear Projection Screens

Several possibilities for making more efficient rear-projection screens are discussed in a report by the [REDACTED]. The report discloses the findings of a 2½ year study into screen characteristics. It was undertaken in an effort to find means to produce a screen with minimum light scattering, a controlled viewing angle and high resolution. The screen must be uniform in its characteristics and be manufactured for a reasonable cost. Future rear projection screens may be composed of glass-ceramic powders or from alumina particles. These materials offer better light efficiency and high resolution. The report also suggests that the glass plate upon which the coating is placed should face the viewer and should contain a certain amount of absorbing material to enhance the contrast in the presence of ambient light. This absorbing material would reduce both the room light reflectance and the stray light rays in the glass. The Project Officer is [REDACTED] Room 5S 453J). This study is [REDACTED]

More Thorough Eye Tests

Several modifications have been arranged to increase the value of the NPIC Eye Examination Program. The Program provides for an entry-on-duty examination for CIA photo interpreters by a consultant ophthalmologist. It also includes periodic follow-up checks for all Center PI's and others performing similar functions. The examinations will be conducted in the NPIC Dispensary and will be provided at government expense. The program is similar to those conducted by most progressive industries. There will be a number of tests, including color tests, tests for stereo acuity, near and far, monocular and binocular acuity tests and a measure of interpupillary distance, or the distance between a person's pupils when in focus on a distant object. The information obtained from these tests should give NPIC a better insight into the visual capability of its personnel on a group level. These tests will be individually scheduled and will take about 15 minutes. The program does not provide for the purchase of eyeglasses or the writing of prescriptions and is not intended to substitute for periodic eye examinations by your personal ophthalmologist. Overall responsibility for conducting the program rests with [REDACTED] Senior Behavioral Scientist, DED/TSSG. Any questions about the program should be addressed to [REDACTED] Room 5S 453D). This item is classified [REDACTED]

~~SECRET~~

R&D NEWS NOTES

(Date)

TO: Editor, R&D NEWS NOTES, TSSG/DED

FROM:

I would like to offer my comments/questions concerning some of the following items.

- a. What is "EXRAND"?
- b. BPE--Another NPIC Success
- c. Popular Zoom 70 Attachment
- d. Better Rear Projection Screens
- e. More Thorough Eye Tests